Bonneville Power Administration
Fish and Wildlife Program FY99 Proposal Form

Section 1. General administrative information

Nez Perce Trout Ponds

Bonneville project number, if an ongoing project 9501300

Business name of agency, institution or organization requesting funding
Nez Perce Tribe

Business acronym (if appropriate) NPT

Proposal contact person or principal investigator:

Name	James L Mauney
Mailing Address	PO Box 365
City, ST Zip	Lapwai, Idaho 83540
Phone	208-843-7320
Fax	208-843-7322
Email address	jamesm@nezperce.org

Subcontractors. List one subcontractor per row; to add more rows, press Alt-Insert from within this table

Organization	Mailing Address	City, ST Zip	Contact Name
Nez Perce Limestone	PO Box 365	Lapwai, Id. 83540	Gordon HighEagle
U. S. Army Corps of Engineers	Walla Walla Dist.	Walla Walla, Wa. 99362-1876	Dale Smeltzer

NPPC Program Measure Number(s) which this project addresses.
10.8D.1, 10.8D.2

NMFS Biological Opinion Number(s) which this project addresses.

N/A

Other planning document references.

If the project type is "Watershed" (see Section 2), reference any demonstrable support from affected agencies, tribes, local watershed groups, and public and/or private landowners, and cite available documentation.

CBFWA Resident Fish Managers. 1997. Draft multi-year implementation plan for resident fish protection, enhancement and mitigation in the Columbia River Basin. Technical Planning Document. Columbia Basin Fish and Wildlife Authority. Portland, OR.

This project directly addresses objectives for Dworshak River and Tributaries identified in Section 6.6.5.3.B. This effort specifically seeks to (1) pursue opportunities for sustainable trout fisheries that are compatible with the continued persistence of native resident fisheries and their restoration to near historic abundances (includes intensive fisheries within closed or isolated systems and (2) develops additional hatchery trout fisheries to substitute, in part, for anadromous fisheries until anadromous fisheries impacted by federally licensed and operated facilities are restored to near historic levels.

Subbasin.

Clearwater River, Salmon River

Short description.

Repair two existing trout ponds and conduct site inventory, design, construction and management of up to 12 additional fish ponds to provide consumptive resident fisheries to partially compensate for irretrievable losses of anadromous fisheries caused by the permanent migratory blockage at Dworshak Dam.

Section 2. Key words

Mark	Programmatic Categories	Mark	Activities	Mark	Project Types
	Anadromous fish	*	Construction	*	Watershed
x	Resident fish	*	O & M		Biodiversity/genetics
*	Wildlife	*	Production		Population dynamics
	Oceans/estuaries		Research	x	Ecosystems
	Climate	*	Monitoring/eval.		Flow/survival
	Other	x	Resource mgmt		Fish disease
			Planning/admin.		Supplementation
			Enforcement	*	Wildlife habitat en-
		*	Acquisitions		enhancement/restoration

Other keywords.

subsistence, recreation, resident fish substitution, trout ponds

Section 3. Relationships to other Bonneville projects

Project #	Project title/description	Nature of relationship
N/A	N/A	N/A

Section 4. Objectives, tasks and schedules

Objectives and tasks

Obj 1,2,3	Objective	Task a,b,c	Task
1	Pond maintenance to support 8,750 - 10,500 pounds of trout annually for harvest	a	maintain vegetated perimeter
		b	maintain silt retention basins
		c	monitor pond depth
		d	monitor dam structural integrity
		e	periodic silt removal
2	New pond development to support 8,750 - 10,500 pounds of trout annually for harvest. construct additional ponds	a	engineering design
		b	land acquisition
		c	environmental (NEPA) analyses
		d	construction
3	Pond habitat management and fishery management to support 8,750 - 10,500 ponds of trout annually for harvest.	a	monitor water quality
		b	monitor and regulate water quantity
		c	stock trout for harvest
		d	monitor fish growth
		e	monitor fisheries (catch rate, harvest, return to creel)

Objective schedules and costs

Objective #	Start Date mm/yyyy	End Date mm/yyyy	Cost %
1	09/96	12/2050	25
2	01/97	12/2001	25

3	09/96	12/2050	50

Schedule constraints.

Detail of NEPA documentation, annual budget constraints, land negotiations, weather

Completion date.
2050

Section 5. Budget

FY99 budget by line item

Item	Note	FY99
Personnel	7 individuals, 1998 = 128,104	156,467
Fringe benefits	1998 = 22,060	30,167
Supplies, materials, non-expendable property	1998 = 14,000	14,000
Operations & maintenance	1998 = 2,400	2,400
Capital acquisitions or improvements (e.g. land, buildings, major equip.)		100,000
PIT tags	# of tags:	
Travel	1998 = 4,000	4,000
Indirect costs	1998 = 55,112	65,894
Subcontracts	1998 = 508,000	360,000
Other	Vehicle Costs, 1998 = 16,335	16,335
TOTAL		749,263

Outyear costs

Outyear costs	FY2000	FY01	FY02	FY03
Total budget	750000	300000	300000	300000
O&M as % of total	.5	1	1	1

Schedule constraints. Identify any constraints that may cause schedule changes. Describe major milestones if necessary.

detail of NEPA documentation, annual budget constraints, land negotiations, weather

Completion date. Enter the last year that the project is expected to require funding.
2050

Section 6. Abstract

form.

The Nez Perce Trout Ponds project is funded by Bonneville Power Administration (BPA) pursuant to measures 10.8D.1 and 10.8D2 of the Northwest Plower Planning Council's 1995 Resident Fish and Wildlife Amendments to the Columbia River Basin Fish and Wildlife Program (Program).

The 1995 Fish and Wildlife Program recognizes that there are irretrievable losses associated with areas permanently blocked to anadromous fish. The resident fish substitution portion of the Program is intended to partially offest these losses through development of additional resident fishery opportunities. As a resident fish substitution project, the NPT goal is to develop trout ponds to substantively increase harvest. Our approach to using isolated ponds for the developing fisheries is to minimize inter- and inter-specific competition and hybridization with naturally producing native species. This approach also isolates the fishery to avoid incidental harvest and mortality on sensitive native populations.

The expected outcome is to have sufficient pond habitat constructed by 2001 to support an annual harvest of 10,500 pounds of resident salmonids.

Project evaluation will be conducted via:

(a) creel surveys to determine harvest rates and harvest
(b) fish sampling via gill nets, seining, and the fishery to determine fish growth and
(c) temperature, oxygen, and other parameters to track water quality, and
(d) echo-sounding and direct sounding to monitor sedimentation.

Section 7. Project description

a. Technical and/or scientific background.

Talmaks Dam and Reservoir is located in north central Idaho within Nez Perce Reservation. The Reservoir is located 8.8 km (5.5 mi.) southeast of the Municipality of Winchester. The Reservoir impounds headwaters of Lawyer's Creek. The watershed includes forested and agriculture land. Most water is contributed by surface tributaries which are seasonal (October through May).

Talmaks Reservoir is 250 m (825 ft.) in length with a surface area of 1.6 hectares (3.9 acres)(Matthews, 1995). Average annual depth is 1,7 m (5,.7 ft.); maximum seasonal depth is 3.7 m (12.1 ft.). Mean annual water retention time is 3.6 days.

Mud Springs Reservoir is located approximately 1.8 km (3 mi.) southeast of Municipality of Winchester. The Reservoir has a watershed of approximately three square miles. The watershed includes forested and agriculture land. The reservoir impounds the headwaters of Lapwai Creek. The major tributary is seasonal (October through May). The Reservoir outflow travels 3.2 km (2 mi.) to Winchester Lake.

Total surface area of Mud Springs Reservoir is approximately 3 hectares (7.4 ac). Average annual and maximum seasonal depths are 1.9 m (6.1 ft.) and 2.8 m) (9.1 ft.) respectively.

During the fall of 1992, personnel of the Nez Perce Tribe, Department of Water Resources (NPTDWR) observed that Talmaks Lake was experiencing water loss. The loss was apparently occurring through the 12 inch drain pipe and valve located at the center of the earthen Dam. A flow measurement conducted November 22 indicated 30 gpm was exiting the Reservoir.

The consequences of the apparent Reservoir drain valve malfunction could be (1) a potential Dam safety threat (2) a total fish kill (3) an additional fish stocking cost, (4) a cultural and recreational resource loss for the Nez Perce Tribe. It was strongly recommended that steps be taken immediately to repair this leak. A number of makeshift attempts to repair this leak were made with little success.

During a period of extremely elevated water temperatures in August of 1992, there was a massive algae bloom in Mud Springs Lake. This bloom resulted in severe oxygen depletion and an almost complete kill of rainbow trout. The winter of 1992/93, winter kill occurred in both lakes. During this winter the Talmaks rainbow population was virtually decimated. Oxygen depletion in Mud Springs was apparently so severe that an estimated 1,000 - 3,000 black bullhead (*Ictalurus melas*) were killed.

In August of 1995, staff and the contracting officers technical representative for Bonneville toured the Tribal lakes. Various options for dam modifications were discussed. In September of that year staff assisted a U.S. National Resource Conservation Service (NRCS) engineer on surveys of the dams. NRCS staff subsequently made recommendations for Dam restoration. Personnel who have observed Talmaks and Mud Springs and have reviewed the physical/chemical data available on the lakes agree that increases in water depth were desirable to sustain viable, year around cold water fisheries.

At a first step, the lakes were to be drained during a period of dry weather in the late summer. When the lake beds dried, removal of silt and deepening would be initiated and repairs to the Talmaks Lake drain system were to be completed. With sufficient funds available the height of the dams would be increased. A system of settling ponds would be constructed along the inlet streams which would trap silt. Ideally, silt collected would be removed yearly.

In February of 1996 warm rains combined with snow melt off and saturated soil conditions caused some of the heaviest flooding to occur in the region since 1979. On February 8, 1996 NPT requested a representative of Wyatt Engineering to field inspect Mud Springs Dam for structural integrity. The inspection was made on February 18, 1996 (Reinhart, 1996).

During the flood, water topped the Dam on the northwest end near the 46 cm (18 inch) corrugated overflow pipe. The inlet end of the overflow pipe was submerged and obstructed with debris. Water flowing over the Dam eroded a segment of the road spanning the top of the Dam. Channel erasion was approximately 4.6 m (15 ft.) wide and .2 to .5m (6 to 18 in.) deep, and exposed protective riprap.

Recommendations were that the breach and channel across the top of the Dam should be repaired. Recommended improvement to the Dam was to construct a concrete overflow spillway. The spillway would protect the Dam during severe rainfall and run-off events and would prevent water from eroding portions of the Dam if the main discharge and overflow pipes failed or become plugged with debris.

Additional recommendations were that the entrances to the main discharge and overflow pipes should be inspected regularly during the rainy season and after each significant rainfall. The downstream face of the Dam would be protected against erosion by maintaining the growth of native grasses.

Flood related repairs to the Mud Springs Dam were proposed and submitted to the Federal Emergency Management Agency (FEMA) for funding. A total of $3,085.00 was

allocated.

Staff observed that during this flood event Talmaks Dam came within 5 cm (2 inches) of being breached. Failure of this Dam would endanger homes and properties along Lawyer's Creek and the town of Kamiah. It was thus believed advisable to raise the height of Talmaks Dam in part to diminish the probability of future flooding damage.

Formal permission to drain Talmaks Reservoir for drain modification and sediment removal was requested from the Talmaks Lake Association which is entrusted with the responsibility of managing Talmaks Camp and the campground environment. Permission was granted to drain the Reservoir at the conclusion of the summer 1996 camp session, ending in late July. Record levels of precipitation over the watersheds and continued high inflow into Mud Springs and Talmaks Lakes delayed implementation of plans for dam reconstruction (drainage of the latter Reservoir was necessary for plan implementation).

Plans for modification of the Talmaks Dam drain were received from NRCS. A prospective contract was contracted for an on-site scoping inspection of the Talmaks project in early August. The draft subcontract proposal was submitted to and approved by the NPT office of Legal Counsel and NPTEC. Formal bid advertisement for a subcontractor to perform needed repairs and rehabilitation was scheduled for early September. Drainage of Talmaks Lake in preparation for Dam reconstruction was begun on August 13, 1996.

NPTDFRM staff prepared a contract for Talmaks reconstruction to including repairs of the drain system, heighten the Dam 3 feet and thicken the Dam base in proportion. Dam enlargement was to be accomplished with materials removed from existing lake bottom. The contract included an increase of Mud Springs spillway by installation of a concrete overflow spillway and heightening the damaged end of the dam. The Mud Springs constructions was to include instillation of a concrete overflow spillway.

The contract for both projects was awarded to Jay Jackson and Associates of Homedale, Idaho. Contract work was begun on September 25 and completes October 18

The Tribal trout ponds are extremely rich in fish food organisms including aquatic insects and crawfish. Talmaks Lake also has a good population of speckled dace (Rhinichthys osculus) which serves as a forage species for larger adult rainbow. Growth rates observed for stocked fish have been good. Sampling in November of 1991 showed Mud Springs rainbow from 1990 stocking as fingerlings to average 10 inches (25 cm) and from the 1991 stocking as fingerlings to average 8.7 inches (22 cm). Sampling in March of 1992 showed the following average lengths:.

	1990		1991	
	In.	cm.	in.	cm.
Mud Springs	12.5	31.8	9.8	24.9
Talmaks	11.6	29.5	8.3	21.1

Two experimental gillnets were fished in Mud Springs on 6/13/95. A total of 34 rainbow trout and 192 black bullhead were taken. The rainbow averaged 26 cm (10.35 in) total length. The bullhead ranged from 14.5 to 24.6 cm (5.7-9.7 in) in length.

Observations of staff were that Tribal fishers had been harvesting these rainbow in good numbers through the spring.

On March 20, 1996, two gillnets were set in Talmaks Reservoir to inventory the over-wintered fish population. These nets were fishing for 24 hours. The catch included two very large rainbow trout The rainbow were 56 cm (22 in) and 58 cm (23 in) total length. These rainbow were carryovers from a 1992 or earlier stocking. trout was dissected and found to be a heavily gravid female. The coho averaged 16 cm (6.4 in) total length. These salmon were judged by coloration to be in smolting condition.

On March 20, 1996 Mud Springs was stocked with approximately 4,000 catchable rainbow obtained through cooperation of the U.S. Fish and Wildlife Service, Dworshak Complex, Ahsahka, Idaho. These rainbow averaged approximately 19 cm (8.3 inches) in length. On July 9, a second stocking of approximately 6,000 catchable rainbow from Dworshak Hatchery was made in Talmaks Lake.

A formal catch and effort study was initiated for the Mud Springs fishery in May of 1996 and continued into October. Observations are that there was been substantial participation in this fishery by Tribal members with family groups and youth constitute a majority of the effort.

An estimated total of 2,335 rainbow were harvested during the study. Fishers effort totaled 2,010 hours for a catch per fish hour of 1.16. To gather this data by direct observation required 259 monitor hours. A high monthly catch and effort of 871 and 851 respectively were recorded for July. The high monthly CPUE of 3.37 fish per fisher hour was for September when the total catch and effort were 357 and 103 respectively. During early October, very little interest in this fishery was noted and monitoring was discontinued.

Following winter freeze up some effort and catch has been noted for Tribal members ice fishing. No quantitative data has been collected for this fishery.

Some Tribal Fishers were observed to practice catch and release of rainbow trout. Data on total catch and release is not available but numbers are much less than those for catch and retention. Fishers have been encouraged to retain bullhead caught and thus reduce the competition this species with trout for food and oxygen during critical periods.

Prior to the May 20, 1996 stocking, limited numbers of Tribal members fished Mud Springs for resident rainbow which overwintered from the 1995 stocking. Catch success for these fish was good. Fish length data was collected from angler catches on May 14 and May 16. These rainbow were found to average 29.5 cm (11.6 inches) in length and were very robust and in good condition.

The tracts surrounding the reservoirs have historically been leased for cattle grazing. Cattle droppings have greatly contributed to the over-enrichment of the impoundments and escalated algae growth. Considerable time was spent by project personnel repairing fencing and cattle excluder to prevent the direct access of cattle to the Tribal Lakes.

During October of 1996 NPTDRFM personnel contacted the NPT Department of Forestry (NPTDF) about proposed logging around the Tribal Lakes. It was feared the proposed boundaries for logging would decrease the shading effects of forestry canopy, possibly lead water temperatures increase during the summer, and ground disturbance would result in increased siltation. Joint staff field inspections were made of the

proposed cuts. Compromise no cut and no heavy equipment operation zones around the lakes were agreed to. The boundaries of these zones were to be 15 and 30 meters respectively (50 and 100 ft). Comments were made on access road and culvert problems. The NPTDF proposed crossing of the Mud Springs Dam by logging trucks. Comments by NPTDFRM staff pointed out that Dam protection by surface hardening must be accomplished before such traffic was permitted to ensure the integrity of the Dam.

b. Proposal objectives.

The Nez Perce Tribal Trout Ponds project funded by Bonneville Power Administration was authorized under Sections 10.8D.1 and 10.8D.2 of the Northwest Power Planning Council's 1995 Resident Fish and Wildlife Amendments to the Columbia River Basin Fish and Wildlife Program. Program measures state that the Bonneville Power Administration (BPA) shall fund the Nez Perce Tribe for the following resident fish substitution actions in the blocked area above Dworshak Dam.

"Develop, maintain and manage trout ponds within the Nez Perce Indian Reservation including (1) physically improve, maintain, monitor and stock two existing trout ponds; (2) identify through site inventory and analysis additional sites suitable for fish pond construction; (3) construct additional fish ponds, depending on availability of suitable sites; and (4) maintain, monitor and stock the additional fish ponds ."

c. Rationale and significance to Regional Programs.

Nez Perce Tribal members have by necessity and tradition used the natural resources of all lands within the Salmon and Clearwater River subbasins since time immemorial. Construction of Dworshak and the lower Snake River dams have been a major factor in the great decline of anadromous fish species returning to the Snake River basin. Availability of fish through the Nez Perce Trout Pond project will help meet, in part, the current subsistence and traditional needs of the Nez Perce.

d. Project history

Water resources on the Reservation are highly valued by the Nez Perce Tribe. The two Tribal reservoirs, Talmaks and Mud Springs, are located on Tribal units 14 and 11 respectively in Lewis County, Idaho. These lakes were constructed by the Bureau of Indian Affairs (BIA) in 1964. Each reservoir serves the Nez Perce Tribe in various campsites, including as primary locations to hold retreats and camp outs on the Reservation. Because the reservoirs and surrounding areas are used primarily for traditional recreation and food gathering, the protection of these reservoirs and their watersheds is essential.

Historically, Tribal lakes were stocked with rainbow trout *(Salmo gardneri)*. When

available, initial stockings were often of catchable size trout. Stocking of trout in these lakes was discontinued in the 1980's and reinitiated in 1990.

By 1971 it was recognized by resource manager's that the impoundments' shallow water depths 8 to 10 feet (2.4-3 meters) maximum do not always provide adequate living conditions in respect to dissolve oxygen and temperature for cold water species such as trout. Fish mortality or kills were sometimes the results. There is little inflow into these ponds during a normal, dry, late summer or during winter freeze. In the summer water temperatures warm into the 60's to high 70's F (16 to 21 C). With elevated water temperatures and much sunlight available, rapid growth of aquatic plants and algae occur. High plant density may cause high oxygen demand at night and during periods of cloudy weather. Deep waters, where present, provide a layer isolated from direct warming by the sun and from the oxygen consuming processes of decomposition associated with the lake bed.

An exceptionally long, cold winter may result in a thick layer of snow covered ice on the ponds. In a shallow lake decomposition of organic materials and fish usage may then result in oxygen depletion and anaerobic conditions throughout the water column and fish mortality ensue. In a deep lake a portion of the water column may remain oxygenated and fish life will be sustained.

In 1971 staff of the U.S. Dept. of Interior recommended construction to increase the height of Mud Springs Dam by 8 feet (Brau,1976). Engineering feasibility studies were conducted and constructed costs discussed. The Nez Perce Tribal Executive Committee (NPTEC) voted unanimously in favor of this construction (Halfmooon,1971). Apparently funding was not forthcoming and construction was never undertaken.

Tribal fisheries staff have had the responsibilities for Tribal lake management since 1990. Through the years following construction the lakes' fisheries have provided Tribal Fishers with welcome subsistence and recreational opportunities. With predicted low returns of salmon for the foreseeable future, alternate fisheries are of increasing importance. Availability of fishing opportunities are extremely important to the education of Tribal youth traditional subsistence ways.

e. Methods.

Field explorations were undertaken the spring of 1996 and intensified the summer and fall of 1997 to identify and inventory additional sites suitable for fish pond construction.

I. Cold Springs Reservoir

The proposed Cold Springs Reservoir site is located on the headwaters Cold Springs Creek which is a tributary of Big Canyon Creek which is a tributary of the Clearwater River. The site is approximately 5 miles north of town of Craigmont. The proposed reservoir would flood Tribal lands and portions of 2 tribal allotments. The Reservoir access road turns north of U.S. 95 at the Craigmont town limits. The Reservoir will lie within Idaho’s Lewis County.

The dam will be of a height such as to flood the impoundment area to a depth of approximately 50 feet. Survey boundaries will be clearly marked for evaluation of the Departments of Forestry, Water Resources, and Lands as well as landowners. Water flows, temperatures, and chemistries will be presented on standard forms. The work covered by this section includes the furnishing of all plant, labor, tools, equipment and materials, and performing all operations in connection with the site evaluation.

Pre impoundment data gathered will include:

(1) Weekly Cold Springs Creek monitoring for
    a. flow rates b. Chemistries including dissolved oxygen, pH, and temperatures
(2) Survey of proposed Reservoir boundary with water depths to 50 ft. level at dam site. Compute total acreage flooded; this will be broken down into acres of timber flooded; acres in individual allotments flooded; and acres of private lands flooded if any.
(3) The survey will show any existing roads which may be lost and indicate the need for an additional access road(s).
(4) Soil profile(s) will be taken in the dam area.
(5) Core sample(s) will be taken in the proposed dam area.
(6) A preliminary dam design with quantities of materials needed for construction and costs estimates will be by the Corps. of Engineers.
(7) The Department of Cultural Resources will inventory the site.

II. <u>High Falls Reservoir</u>

The proposed High Falls Reservoir site is in the headwaters of Deer Creek which is tributary to the Salmon River approximately 10 miles southwest of Waha Reservoir. The proposed reservoir would flood Tribal lands. The Reservoir access road is off the Deer Creek Road. The Reservoir will lie within Idaho's Lewis County.

The dam will be of a height such as to flood the impoundment area to a depth of approximately 50 feet. Survey boundaries will be clearly marked for evaluation of the Departments of Forestry, Water Resources, and Lands as well as landowners.

Pre-impoundment data gathered will include:

(1) Biweekly Deer Creek monitoring for;
    a. Flow rates b. Chemistries including dissolved oxygen, pH, and temperatures.
(2) Survey of proposed Reservoir boundary with water depths to 50 ft. level at dam site. Compute total acreage flooded; This will be broken down into acres of timber flooded; acreage in individual allotments flooded; and acreage of private lands flooded if any.
(3) The survey will show any existing roads which may be lost and indicated the need for an additional access road(s).
(4) Soil profile(s) will be taken in the dam area.
(5) Core sample(s) will be taken in the proposed dam area.
(6) Preliminary dam design with quantities of materials needed for construction and costs estimates will be by the Corps. of Engineers.
(7) The Department of Cultural Resources will inventory the site.

f. Facilities and equipment.

. **EQUIPMENT:**GSA Vehicles
Number: 3 (1 Chevy 1-ton pickup, 1 Ford Explorer, 1 Dodge 1-ton pickup)
To be purchased, rented, or owned
Use: The vehicles will be used to transport employees equipment and materials.

. **EQUIPMENT:** chain saw
Number: 2
to be purchased, rented, or owned
Use: to cut trees, brush and construction materials

. **EQUIPMENT:** office computer & printer
Number: 1
to be purchased, rented, or owned
Use: analyze data and write reports

. **EQUIPMENT: ATV**
Number: 2
to be purchased, rented, or owned

. **EQUIPMENT:** Boats, 10- 12 ft
Number: 2
to be purchased, rented, or owned
Use: reservoir fish inventory, water quality monitoring

. **EQUIPMENT:** dissolved oxygen meter
Number: 1
to be purchased, rented, or owned be purchased, rented, or owned
Use: water quality studies of impoundments

. **EQUIPMENT:** depth recorder
Number: 1
to be purchased, rented, or owned be purchased, rented, or owned
Use: water quality studies of impoundments

. **EQUIPMENT:** camera and telephoto lens
Number: 1
to be purchased, rented, or owned be purchased, rented, or owned
Use: document reservoir studies

. **EQUIPMENT:** outboard motors (5 to 10 horsepower)
Number: 2
to be purchased, rented, or owned be purchased, rented, or owned
Use: document reservoir studies

. **EQUIPMENT:**radios, (3 handheld, 2 vehicle based)
Number: 5
to be purchased, rented, or owned be purchased, rented, or owned
Use: field communications

. **EQUIPMENT:**trailors (2 boat, 1 snowmobile & ATV)
Number: 2

to be purchased, rented, or owned be purchased, rented, or owned
Use: field transportation of boats

- **EQUIPMENT:**trailors (for snowmobiles and 4 wheelers)
  Number: 1
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: field transportation of ATV'S
- **EQUIPMENT:**flow meter
  Number: 1
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: water quality monitoring
- **EQUIPMENT:**pH meter
  Number: 1
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: water quality monitoring
- **EQUIPMENT:**level and transit combination
  Number: 1
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: land surveys
- **EQUIPMENT:** Philadelphia rod
  Number: 1
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: land surveys
- **EQUIPMENT:** gillnets
  Number: 4
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: fish sampling
- **EQUIPMENT:** ice auger (gas powered)
  Number: 1
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: winter fish and water sampling
- **EQUIPMENT:** cam recorder
  Number: 1
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: documentation of fisheries
- **EQUIPMENT:** conductivity meter
  Number: 1
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: water quality monitoring
- **EQUIPMENT:** fish totes
  Number: 4
  to be purchased, rented, or owned be purchased, rented, or owned
  Use: fish transportation
- **EQUIPMENT:** binoculars
  Number: 2
  to be purchased, rented, or owned be purchased, rented, or owned

Use: fishery monitoring

. **EQUIPMENT:** hand held tape recorder
Number: 2
to be purchased, rented, or owned be purchased, rented, or owned
Use: fishery monitoring

References.

Rondorf, D.W., and K.F. Tiffan. 1997. Identification of the spawning, rearing and migratory requirements of fall chinook salmon in the Columbia River Basin. Annual Report 1995. DOE/BP-21078-5, Bonneville Power Adminsitration, Portland, Oregon.

Literature Cited

Brau, Al. 1976. Engineering Investigative Report Mud Springs Reservoir. U.S. Department of the Interior, Plummer, Idaho.

Halfmoon, Richard A. 1971. Resolution 71-177. Mud Springs Lake Enlargement. Nez Perce Tribe. Lapwai, ID.

Matthews, Jonathan P. 1995. Mud Springs Reservoir. Final report. Nez Perce Tribe, Water Resource Division. Lapwai, ID.

Matthews, Jonathan P. 1995. Talmaks Reservoir phase I diagnostic and feasibility water quality study. Nez Perce Tribe, Water Resource Division. Lapwai, ID.

Reinhart, Matt. 1996. Wyatt Engineering 1996 Field Inspection report for the Mud Springs Reservoir Earthen Dam. Lewiston, ID.

Mauney, James L. 1998. Nez Perce Trout Ponds Annual Report 1996 Nez Perce Tribe, Department of Fisheries Resource Management. Lapwai, ID.

Section 8. Relationships to other projects

Several agreements (written and verbal) have been made between various agencies and individuals to work together with the Nez Perce Tribe Trout Ponds Project in preforming the objectives for 1998. Project Leader James Mauney constantly seeks agreements and/or cooperate between other agencies for work to be completed on this project.

This project will directly link with the BPA funded Nez Perce Tribal Watershed Management Project (9607700) to effect management of the watersheds in which the proposed impoundments lie. Watershed management elements include soil stabilization, cattle exclusion, and riparian management. The Nez Perce Department of Wildlife will be involved in management of the wetlands created following flooding. The U. S. Army Corps of Engineers is interested in integrating Cold Springs Reservoir into flood abatement options for Big Canyon Creek.

Section 9. Key personnel

NAME: Richard H. Powaukee, Jr.
TITLE: Harvest / Trout Ponds Management Technician
FTE: 1.0
DUTIES ON PROJECT: Lake and Stream Habitat enhancement 2). cattle exclusion 3). lake stocking 4). computer data entry 5). Biological sampling of fish species in Tribal Lakes 6) use of power tools, boats, ATV's, video documentation of Fisheries Activities.
QUALIFICATIONS: 13 years Fisheries work with the Nez Perce Tribe, Department of Fisheries Resource Management.
EDUCATION: 3.5 years of college level education.

1972-74	Haskell Indian Junior College, Lawrence, Kansas
1977	Utah State University, Logan, UT
1979-80	University of Idaho, Moscow, ID
1982	Lewis & Clark State College, Le**wiston, ID**

CURRENT EMPLOYER: Nez Perce Tribe, Department of Fisheries Resource Management, Harvest / Trout Ponds Management.
CURRENT RESPONSIBILITIES: 1). Tribal Lakes stocking 2). computer data entry 3). cattle exclusion 4). subsistence fish distribution 6). monitoring Tribal fishers 7). Trout Pond Management.
PREVIOUS EMPLOYMENT:

1985-1998 Nez Perce Tribe, Department of Fisheries Resource Management
1980-1984 Nez Perce Tribe, Department of Forestry
1979-80 Seasonal Upward Bound Dorm Counselor
1975-1978 Nez Perce Tribe, Recreational Aid and Director.

EXPERTISE: 1). computer data 2). collecting stream habitat and flow data 3). U.S. vs Canada Treaty 1985 Redd Count Techniques 4). Native American Fish and Wildlife Society President. 5). Integrated Resource Management, AIRI, University of Colorado School of Law, Boulder, CO.
CERTIFICATION: Colorado State University, IF "250 Field Techniques for stream - Habitat Analysis", Aug. 8-12, 1988.
University of Colorado, S 100 "Reservations Resource Planning & Management", June 12-16, 1989
University of Colorado, S 130 "Instream Flow Management", June 12-16, 1989.
University of Colorado, S 140 "Resource Economics & the Management of Land and Water", June 12-16, 1989
University of Colorado, School of Law, Boulder, CO. "Summer Institute on Tribal Governance & Integrated Resource Management, American Indian Resource Institute, June 11-22, 1990.
University of Idaho - "Short Course - Natural History of the Nez Perce Reservation, February 1988, College of Forestry, Wildlife and Range Sciences,

NAME: David J. Kane
TITLE: Fisheries Technician
FTE: 1.0
DUTIES ON PROJECT: 1). Tribal Lakes stocking 2). harvest data on Tribal fisheries 3). computer data entry 4). cattle exclusion 5). habitat enhancement 6). fish distribution 7). reservoir management.
QUALIFICATIONS: Employment History with the Nez Perce Tribe Fisheries totaling 5 years.
CURRENT EMPLOYER: Nez Perce Tribe, Department of Fisheries Resource Management, Harvest / Trout Ponds Management.
CURRENT RESPONSIBILITIES: 1). Tribal Lakes stocking 2). computer data entry 3). cattle exclusion 4). subsistence fish distribution 5). monitoring Tribal fishers 6). Trout Pond Management.
PREVIOUS EMPLOYER:

1993-1998	Nez Perce Tribe, Fisheries Resource Management
1990-1992	Nez Perce Tribe, Water Resource Division
1984-1987	University of Idaho, Anthropology Department Aide

EXPERTISE: 1). equipment operation 2). creel census 3). pit tagging 4). salmon rearing 5). building of salmon redds 6). redd enumeration 7). cartography 8). flow meter.

Name: Greg D.Bybee
Title: Technical Advisor
FTE: 1.0
Duties on Project: Dams construction inspector; assist in the design, surveying and inspection of dams on proposed reservoir sites. Assist in quantity estimations and cost analysis of dams and trout ponds construction. Installation of transect channel monitoring and water quality monitoring sites and data collection interpretation and analysis.

Qualifications: Greg D. Bybee is a certified Operating Engineer through Local 370, Journeyman status. He has worked for several professional firms including but not limited to, Rust Engineering, R&W Engineering, Steelman Duff Inc., CH2M Hill Engineering, Idaho Transportation Department; Survey Party Dist.2, Colville Tribal Service Corporation and self-employed as a certified General Contractor in the states of Washington, Oregon and Idaho and the Nez Perce Tribe.
Degree: Certified Operating Engineer- Local 370 United States Operating Engineers
Certification Status: Technical Advisor
Current Employer: Nez Perce Tribe/Department of Fisheries Resource Management
Current Responsibilities: Assist in the surveying, inspection and quantity estimations of proposed reservoir construction site development. Water quality data collection, interpretation and analysis. Scoping recommendations on 401, 404 and 305(b) proposed projects and implementation. Surveying of transects to be utilized for channel monitoring data collection interpretation and analysis.
Previous Employment:

1996-Present: Nez Perce Tribe Water Resources, Nez Perce Tribe Fisheries/Watershed Management Program
1996-1991: Nez Perce Development, General Contracting, Owner
1991-1987: Steelman-Duff Inc., General Contractor, Superintendent
1987-1984: Rust Engineering, Operating Engineer
1984-1981: RW Engineering, Inspection, Survey Party
1981-1980: Idaho Transportation Department, Survey Party, Inspection and Job Staking

Expertise: Greg D. Bybee has an extensive background in civil engineering and construction. Mr. Bybee's analysis, design and construction capabilities will concentrate on stream morphology, stream rehabilitation, water quality, in-stream structures, channel monitoring, inspection and quality control.
Publication or Job Completions:
(1) Wildhorse Hotel Site Development And Design
(2) Lawyers Canyon Bridge Survey
(3) Lapwai Creek Lower Basin Study & Stream Survey
(4) Lapwai High School Track & Field Site Survey & Staking
(5) Nez Perce Tribe Commodity Foods Warehouse Survey & Staking
(6) Cold Springs Reservoir Site Survey & Staking
(7) Survey & Staking Channel Monitoring And Water Quality Monitoring Sites (Lapwai Cr., Cold Springs Cr., Deer Cr.)
(8) Sweetwater Springs Fish Hatchery Construction, Site Development & Design
(9) Seneca Food Corporation Treatment Facility Site Development
(10) Analysis & Design Bedrock Creek Stream Rehabilitation Project.

NAME: James L. Mauney
TITLE: Trout Pond Biologist and Fisheries Harvest Biologist, Nez Perce Tribe
EDUCATION: B.S., Fisheries, N.C. State University, Raleigh, N.C., 1992
M.S., Animal Ecology, N. C. State University, Raleigh, 19**69**

FTE: 1

CERTIFICATIONS: Professional fisheries biologist, The American Fisheries Society
SCUBA, U. S. Navy School of Deep Sea Divers, Washington, D.C.

EMPLOYMENT HISTORY:

1987-Present Fisheries Management Biologist, Nez Perce Tribe, DFRM, Lapwai, Idaho. Primary duties as management biologist are: the biologically sound harvest of anadromous fisheries in and on the Reservation, ceded lands, and the usual and accustomed fishing areas of the Nez Perce. Duties include: 1). the development and implementation of fisheries programs, 2). supervise and participate in the collection and analysis of biological data, 3) the development and management of management budgets, 4). supervision of fisheries technicians and aids, 4). technical interface with appropriate fish, wildlife, water and land management agencies, 5) prepare and publish technical reports. The primary duties as trout pond biologist are: 1) supervise the physical improvement, maintenance, fisheries monitoring and stocking of existing ponds, 2) identify through site inventory and analysis sites suitable for construction of additional impoundments, 3) supervise the construction of additional impoundments, 5) prepare and publish Trout Pond Technical reports.

1967-1987 Fisheries Biologist, Alaska Dept. of Fish and Game, Juneau, Alaska. As project leader for an anadromous fish projects funded by PL 89-304, : project 1). supervised the operation of vessels, participated in fishing operations, and the collection and analysis of data. project 2). involved the documentation of fish runs on the Yukon River and the surveillance of the Trans Alaska Pipeline project 3). Susitna River study involving the assessment of the fish populations which would
be impacted by dam construction to create a hydroelectric impoundment.

1965-1967 Fisheries Biologist, State of Maryland, Annapolis, Maryland. The work in Maryland was concerned largely with the management of the striped bass and the estuarine fisheries of the Chesapeake Bay. I participated in the SCUBA evaluation of artificial reef and shellfish studies.

1963-65 Graduate Assistant, N. C. State University, Dept. of Zoology, Raleigh, N. C. This project was concerned with the investigation of the effects of industrial pollution on river and estuarine fish life in the Chowan River System of North Carolina and Virginia. Data collected was published as M. S. Thesis.

1992 Federal Aid to Fisheries, U. S. Fish and Wildlife Service, Anchorage, Alaska. Participated in an inventory of fish populations in the Rampart area of the Yukon River which would be impacted by a proposed hydroelectric dam.

Publications Various Tribal harvest reports from 1987- 1997 including: "A survey of the Nez Perce subsistence fishery for steelhead trout (Oncorhynchus mykiss) along the North Fork Clearwater River", " A survey of the Nez Perce subsistence fishery for chinook salmon of the North Fork Clearwater River", "Angler Counts along the Clearwater River and its tributaries during the 1989/90 steelhead open fishery", "Nez Perce harvest for 1987 in Zone 6 of the Columbia river with a review of historical catch data 1980 to 1986", "A survey of the Nez Perce ceremonial and subsistence fisheries for spring chinook salmon in Zone 6 of the Columbia River, "A survey of the Nez Perce subsistence

fishery for spring chinook salmon at Rapid River, Idaho", and "A survey of the Nez Perce ceremonial and subsistence fisheries for chinook salmon (Oncorhynchus tshawytcha) in upper Snake River tributaries, 1993".

Various Technical Reports P.L. 89-304 The Anadromous Fish Act projects including Southeast Alaska Salmon Abundance Index (INPFC Doc. #1130) and Yukon River salmon investigations.

Ira Jones, Clearwater Subbasin Focus Coordinator (1 FTE)
Habitat/Watershed Manager, Nez Perce Tribe

Education

INSTITUTION	LOCATION	ATTENDANCE	MAJOR	DEGREES
University of Montana	Missoula, MT	Sept. 73 - June 74	Wildlife	N/A

CERTIFICATES: N/A
PROFESSIONAL ORGANIZATIONS: N/A

EMPLOYMENT HISTORY

March 3, 1997 to present, Clearwater Subbasin Focus Program Coordinator for the Nez Perce Tribe, Lapwai, Idaho
DUTIES: Analyze programs, laws, policies related to watershed management. Facilitate development of criteria to identify critical fisheries habitat. Develop system to apply criteria to watershed for project development and administration. Prepare plan documents for watershed habitat work coordination. Give educational presentations and workshops for watershed management and proposal development. Provide assistance with proposal development, implementation, monitoring, and assessment.

May of 1996 to present, Habitat/Watershed Manager of the Nez Perce Tribe. Habitat/Watershed Manager of the Nez Perce Tribe. Responsible for planning and implementation of the Early Action Watershed Projects for the Nez Perce Tribe.

6/25/1986 - 3/1/97 Tribal Government Program Manager, United States Forest Service, Region One.

12/14/80 - 6/25/86 Facilities Manager, United States Forest Service, Region One.

7/74 - 10/79 Fire Cache Work Leader, USDA Forest Service, Region One.

RELEVANT JOB COMPLETIONS: 1) Coordinator National, Multi-Regional, and Regional Civil Rights Conferences. 2) Facilitated Treaty Rights workshops with host tribes and multi-government agencies. 3) Organize and conduct Tribal Relations Training primarily for management level from the U.S. Forest Service, Tribes, Bureau of Land Management, and the Bureau of Indian Affairs. 4) Introduced, Implemented, and

managed the Inter-Tribal Youth Practicums for careers in natural resources and leadership within the U.S. Forest Service Regions 1,5,9, and 10. 5) Developed an Intergovernmental Personnel Act (IPA) position to work with the Salish Kootenia college to teach environmental science courses and develop a four-year natural science curriculum at the college. This three-year position and the program developed into a four-year accredited degree program in the fall of 1996.

Section 10. Information/technology transfer

Quarterly reports will be assembled stating, but not limited to, project status, time lines, dollars spent, and problems that need to be addressed during the coming quarter. An end of the year report will compile all data from the quarterly reports determining accomplishments achieved during the previous work season and what information, negative and positive, can be applied to the upcoming season. These reports will be distributed to all involved parties and will be available upon request to interested individuals.